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CR0 2EF, United Kingdom**(51) INT CL⁵**E04H 17/04**

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(56) Documents cited

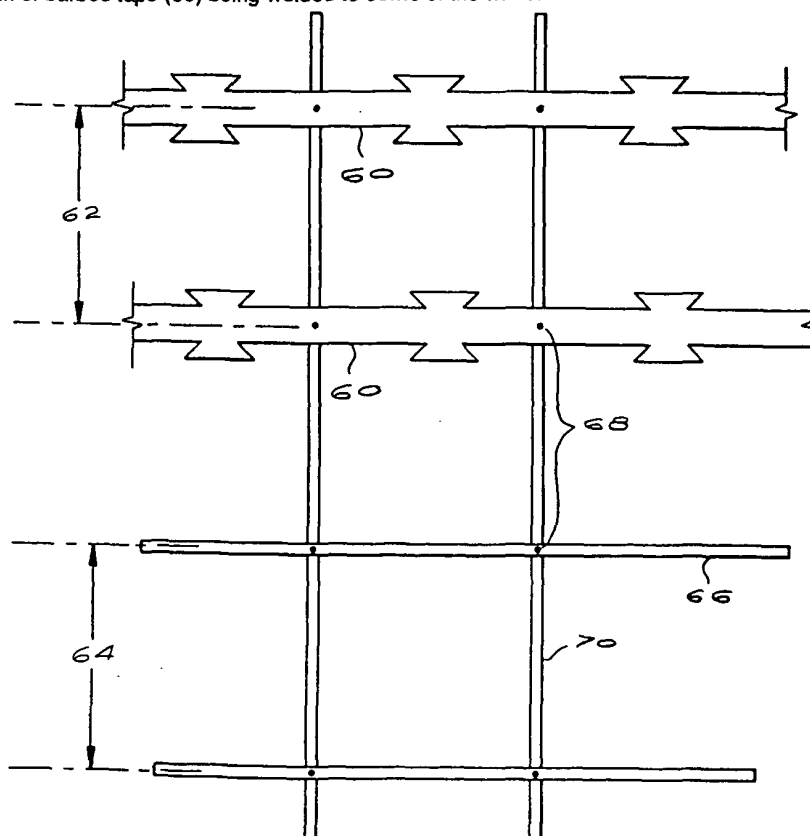
**GB 2228022 A GB 2162879 A GB 2039683 A
EP 0073927 A US 4666129 A US 4328955 A**

(58) Field of search

IJK CL (Edition K) E1D DF109, G4N NSBA**INT CL⁵ E04H****On-line database: DERWENT W.P.I.**

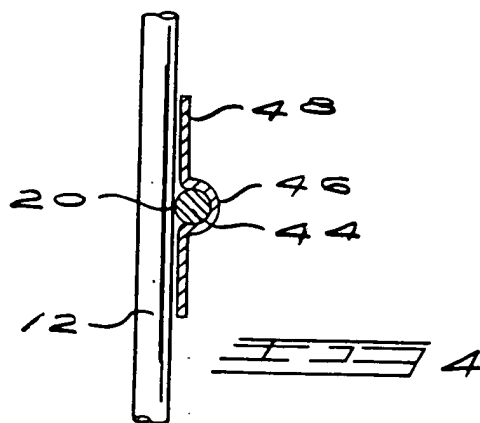
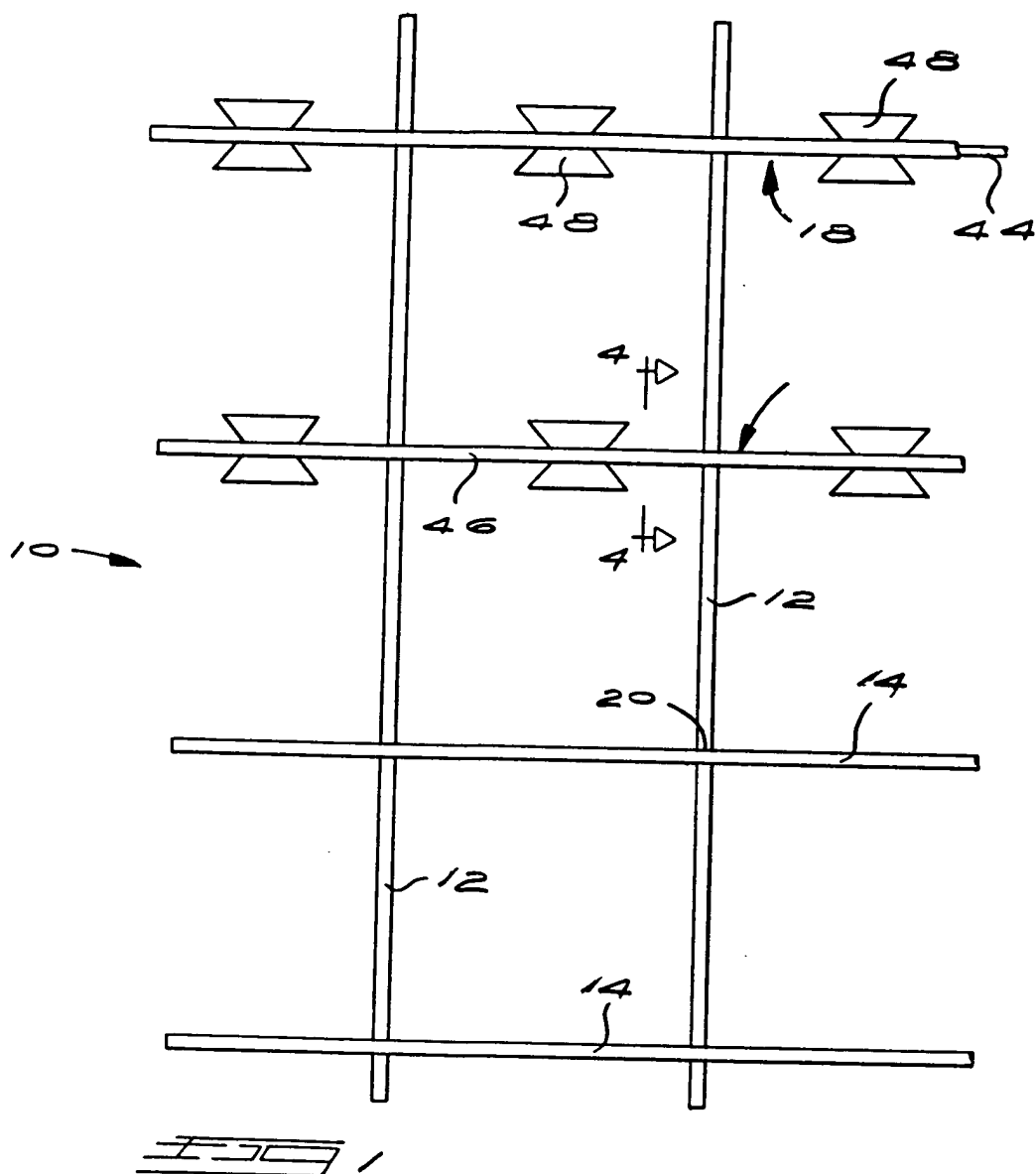
(54) Security fencing

(57) Fencing material comprises overlying wires (66, 70) arranged in a mesh configuration and welded to one another, at least one length of barbed tape (60) being welded to some of the wires.

**FIG 5**

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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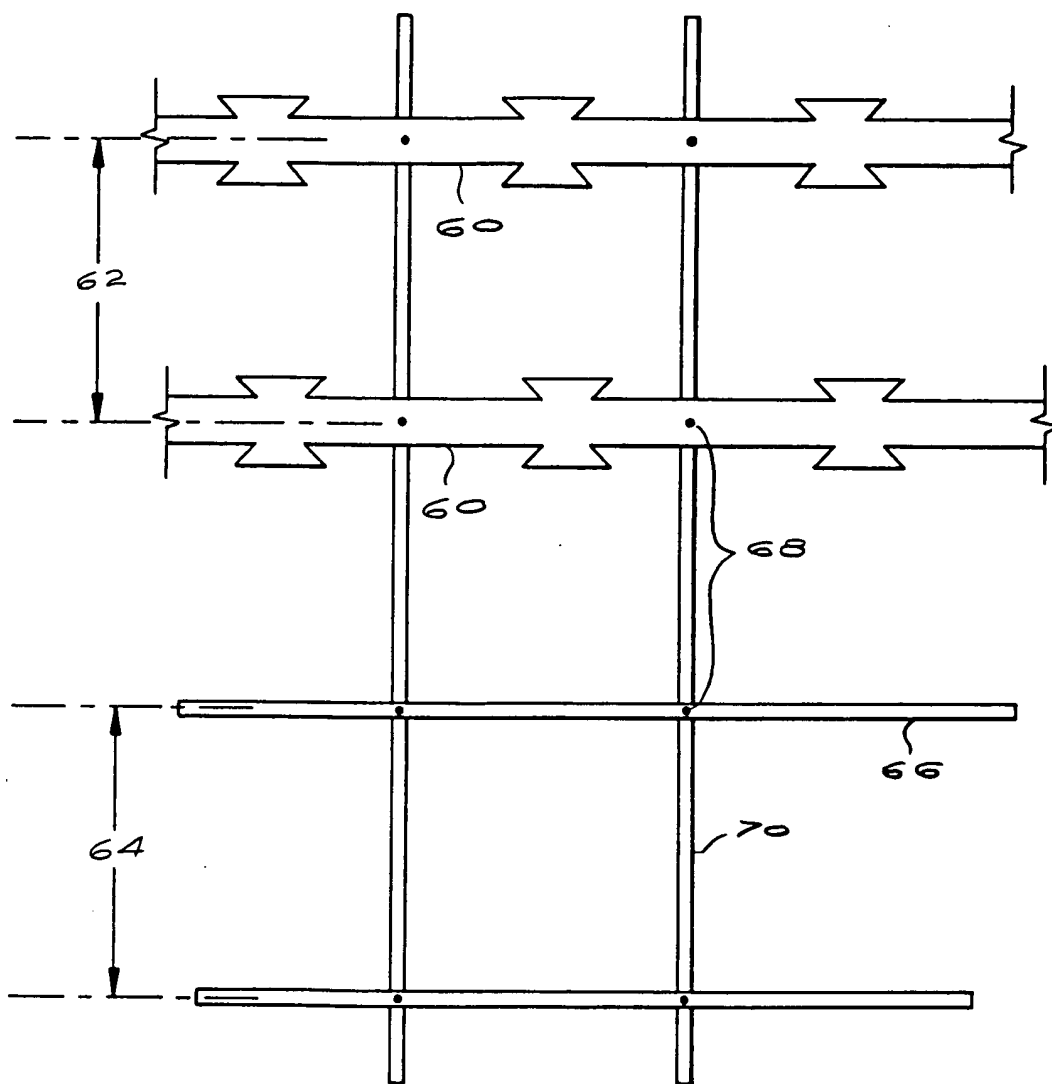


FIG 5

FENCING MATERIAL AND ITS METHOD OF MANUFACTURE.

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This invention relates generally to fencing material and is particularly concerned with upgrading the security effect of fencing material known as welded mesh.

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The invention provides fencing material which includes a plurality of overlying wires which are welded to one another to form a mesh, and at least one length of barbed tape which is welded to transverse wires in the mesh.

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'Barbed tape' as used in this specification includes a construction in which a length of metallic tape is formed with barb formations and is crimped around a core wire, and a construction which comprises a planar length of metallic tape, with barb formations, with the core wire dispensed with.

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The length of barbed tape may be elongate and extend in the longitudinal direction of the mesh. This may be at right angles to the transverse wires. The length of barbed tape may be substantially parallel to plain wires which are welded to the transverse wires.

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The length of barbed tape may be located at any convenient position across the width of the mesh. For example, the barbed tape may be

The invention also extends to a method of making fencing material which includes steps of feeding at least one length of barbed tape and a plurality of lengths of wires, all of which are parallel to and spaced from one another, through a welding station in steps, and, for each step movement, at the welding station, welding a transverse wire to the barbed tape and to each of the lengths of wires.

The method may include the step of drawing the barbed tape directly from a machine which is used to manufacture the barbed tape. Thus, the feeding of the length of barbed tape, in steps to the welding station, may be synchronized to the manufacture of the barbed tape. The barbed tape may be orientated so that, if it has a core wire this is brought into contact with, and hence is welded directly to, the respective transverse wires.

The invention is further described by way of examples with reference to the accompanying drawings in which:

Figure 1 is a plan view of portion of fencing material according to one form of the invention,

Figure 2 schematically depicts in plan the method of manufacturing the fencing material of Figure 1,

known per se.

Figure 2 illustrates in plan and schematically an installation 22 for producing the fencing material 10 shown in Figure 1. A substantial portion of the arrangement shown in Figure 2 is conventional and therefore is not described in detail. Those factors which are, however, necessary for an understanding of the present invention are elaborated on.

The arrangement 22 includes a welding bed 24 which has two platens which are movable vertically apart and which carry a plurality of mating welding heads 26. A feeding device 28, alongside the welding bed, is adapted to feed a cross wire 30 transversely into the welding bed when the platens are apart, in a step motion. A cutting device, not shown, is provided to sever the cross wire into relatively short lengths, equal to the width of the finished mesh.

Displaced laterally from the welding bed are a plurality of coils 32 of line wires 34. The line wires pass through a step feed mechanism 36 which operates in unison with the cross wire feeding device 28 and which is adapted to grip the line wires 34 and feed them, in successive steps, towards the welding bed. The line wires 34 of Figure 2 form the line wires 14 of the finished mesh shown in Figure 1.

wires are resistance welded to the cross wire. Thereafter the cross wire 30 is severed from the welded cross wire, the platens are opened and fresh wire feeding takes place to repeat the aforementioned process. In this way a welded mesh 50 is formed from the overlying cross and line wires and barbed tape, and this emerges from the welding bed 24.

In the arrangement shown in Figure 2, a single length 40 of barbed tape is formed along one longitudinal edge of the mesh 50. It is apparent that by replacing any line wire with a mechanism which feeds barbed tape in place of the line wire, the number of lengths of barbed tape, incorporated in the mesh 50, can be varied according to requirement. For example, as has been pointed out, lengths of barbed tape may be positioned at intermediate locations in the mesh, or at each of the longitudinal edges of the mesh, or, in fact, it is possible to replace all of the line wires by lengths of barbed tape. When a large number of lengths of barbed tape are incorporated in the mesh, then it is preferably to feed the lengths of barbed tape from coils to the welding bed rather than from individual barbed tape machines.

It is apparent that if desired the machine 38 and the feeding device 28 can be interchanged so that the cross wires are formed by lengths of barbed tape.

at centres of from 50 mm to 100 mm. The height of the mesh was 2,4 metres.

5 Figure 5 shows a different embodiment of the invention in which the core wire of the barbed tape is dispensed with and use is made of planar galvanized barbed tape strips designated 60 which are parallel to one another at a spacing 62 which is substantially equal to the spacing 64 between parallel plain line wires 66.

10 The strips 60 are preferably preformed and coiled and these coils are used in an arrangement similar to that shown in Figure 2, in place of selected coils 32 from which emerge the line wires 66, marked 34 in Figure 2. The barbed tape machine 38 is thus dispensed with. The lengths of planar barbed tape, without core wires, and plain line wires 66 are then
15 welded at intersecting points 68 to successive cross wires 70 at spaced intervals, substantially in the manner described in connection with Figure 2.

20 The lengths of barbed tape 60 are readily kept planar and the problem of orienting the core wires so that they can be welded to the cross wires, as shown in Figure 4, is eliminated.

The lengths of barbed tape 60 are relatively broad and are made from

unsightly, and can present a danger to innocent people, or animals, coming into contact with the fence.

6. Fencing material according to claim 1, 2 or 3 wherein the barbed tape comprises a planar strip of material with barbed formations which is welded directly to the respective transverse wires.

5 7. Fencing material according to any one of claims 1 to 6 wherein at least one length of the barbed tape is located along at least one longitudinal edge of the mesh.

10 8. Fencing material which comprises a plurality of overlying plain wires which are welded to one another to form an elongate mesh and at least one elongate length of barbed tape located along at least one longitudinal edge of the mesh.

15 9. Fencing material according to claim 8 wherein the barbed tape includes a core wire which is brought into contact with, and which is welded directly to, respective transverse wires in the mesh.

20 10. Fencing material according to claim 8 wherein the barbed tape comprises a planar strip of material with barbed formations which is welded directly to respective transverse wires in the mesh.

11. A method of making fencing material which includes the steps of feeding at least one length of barbed tape and a plurality of

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Examiner's report to the Comptroller under
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Relevant Technical fields

(i) UK CI (Edition K) E1D (DF109) G4N (NSBA)

(ii) Int CI (Edition 5) E04H

Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASE- DERWENT WPI

Search Examiner

D J LOVELL

Date of Search

11.2.92

Documents considered relevant following a search in respect of claims

1-14

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2,228,022 (MRM SECURITY SYSTEMS) note paragraph 1 page 3	1, 8
A	GB 2,162,879 (MAN BARRIER CORP)	1, 8
A	GB 2,039,683 (FIBUN)	1, 8
A	EP 0,073,927 (CL. KA. RA)	1, 8
A	US 4,666,129 (DOBSON)	1, 8
A	US 4,328,955 (HERMANS) note figures 7-11 and last sentence of description	1, 8

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